

GenCore version 5.1.3
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OM protein - protein search, using sw model

Run on: December 19, 2002, 14:50:16 ; Search time 39 Seconds

(without alignments)
1940.676 Million cell updates/sec

Title: US-08-813-323b-2

Perfect score: 3008
Sequence: 1 MESSKMDSPGALQTNPLK.....IKDITFIKIVTSDLPDP 568

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 908470 seqs, 133250620 residues

Total number of hits satisfying chosen parameters: 908470

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :
A_Geneseq_101002:*

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22: /SIDS2/gcgdata/geneseq/geneseq-emb1/AA2001.DAT:*
23: /SIDS2/gcgdata/geneseq/geneseq-emb1/AA2002.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

| Result No. | Score | Query Length | DB ID | Description |
|------------|--------|--------------|-------|--------------------------------|
| 1 | 3008 | 100.0 | 568 | 18 AAW27431 Human CRAF1-a (TRA |
| 2 | 3008 | 100.0 | 568 | 21 AAY98166 Human TRAF3 protei |
| 3 | 3008 | 100.0 | 568 | 23 AAO17757 Human CD40 recepto |
| 4 | 3008 | 100.0 | 650 | 18 AAW27428 Human CRAF1-b (TRA |
| 5 | 3002 | 99.8 | 568 | 17 AAW03146 LMP1 associated pr |
| 6 | 2980.5 | 99.1 | 567 | 22 AAB67615 Amino acid sequenc |
| 7 | 2970.5 | 98.8 | 567 | 17 AAR99259 Full-length CD40 b |
| 8 | 2886.5 | 96.0 | 567 | 23 AAO17756 Murine CD40 recept |
| 9 | 2878.5 | 95.7 | 567 | 23 AAB57054 Mouse ischaemic co |
| 10 | 2847.5 | 94.7 | 543 | 18 AAW27432 Human CRAF1 isofo |

| | | | | |
|----|--------|------|-----|---------------------------------|
| 11 | 2847.5 | 94.7 | 665 | 18 AAW27433 Human CRAF1-b iso |
| 12 | 2831.5 | 94.1 | 543 | 17 AAR98833 CD40 associated pr |
| 13 | 2680 | 89.1 | 516 | 18 AAW27436 Human CRAF1-b iso |
| 14 | 2680 | 89.1 | 638 | 18 AAW27437 Human CRAF1-b iso |
| 15 | 2674 | 88.9 | 512 | 18 AAW27438 Human CRAF1 isofo |
| 16 | 2674 | 88.9 | 634 | 18 AAW27435 Human CRAF1-b iso |
| 17 | 2443.5 | 81.2 | 472 | 17 AAR98835 CD40 associated pr |
| 18 | 2224 | 73.9 | 438 | 21 AAB15721 Delta130 TRAF-3 de |
| 19 | 1701.5 | 56.6 | 347 | 21 AAB15722 Delta221 TRAF-3 de |
| 20 | 1391 | 46.2 | 282 | 21 AAV79565 Human TRAF3 delta |
| 21 | 1253.5 | 41.7 | 558 | 18 AAW27609 Murine TRAF5, a no |
| 22 | 1253.5 | 41.7 | 558 | 18 AAW29257 Murine TRAF5, a no |
| 23 | 1192.5 | 39.6 | 557 | 18 AAW27610 Human TRAF5, a no |
| 24 | 1192.5 | 39.6 | 557 | 18 AAW29258 Human TRAF5, a no |
| 25 | 1192.5 | 39.6 | 557 | 21 AAY98168 Human TRAF5(NC)-CA |
| 26 | 1118 | 37.2 | 228 | 21 AAB07003 CD40 associated pr |
| 27 | 959 | 31.9 | 181 | 17 AAR98834 Mouse ischaemic co |
| 28 | 837.5 | 27.8 | 501 | 23 AAB57335 Mouse TRAF2, Mus |
| 29 | 836.5 | 27.8 | 501 | 23 AAR90578 CD40 receptor asso |
| 30 | 831 | 27.6 | 157 | 17 AAR98836 Human TRAF2 protei |
| 31 | 813 | 27.0 | 155 | 23 AAO17782 Human TRAF2 protei |
| 32 | 744 | 24.7 | 501 | 22 AAY98165 Human TRAF2 splice |
| 33 | 744 | 24.7 | 501 | 22 AAY71903 Human TRAF2 splice |
| 34 | 717.5 | 23.9 | 422 | 22 AAW71901 Human TRAF2 splice |
| 35 | 636.5 | 21.2 | 416 | 17 AAW03147 Human TRAF1, Homo |
| 36 | 636.5 | 21.2 | 416 | 17 AAY98164 Human TRAF1, Homo |
| 37 | 628 | 20.9 | 409 | 17 AAR90577 Human TRAF2R vari |
| 38 | 593.5 | 19.7 | 436 | 22 AAY71902 Human TRAF1, Mus |
| 39 | 563.5 | 18.7 | 417 | 21 AAY87785 Human TRAF1, Mus |
| 40 | 560.5 | 18.6 | 470 | 18 AAW25766 Human TRAF1, Mus |
| 41 | 557.5 | 18.5 | 470 | 21 AAY98167 Human TRAF1, Mus |
| 42 | 553 | 18.4 | 522 | 18 AAW32113 Human TRAF1, Mus |
| 43 | 553 | 18.4 | 522 | 23 AAY98169 Human TRAF1, Mus |
| 44 | 533 | 18.4 | 522 | 23 AAV78288 Human TRAF6 (TNF r |
| 45 | 546.5 | 18.2 | 243 | 21 AAB07002 Human TRAF2 (NC)-CA |

ALIGNMENTS

RESULT 1
AAW27431 standard; Protein: 568 AA.
AAW27431:
27-MAR-1998 (first entry)
Human CRAF1-a (TRAF-3-p55) polypeptide.
CD40 receptor associated factor 1; CRAF1-a; TRAF-3; p55; human;
CD40 mediated intracellular signalling; organ rejection; allergy;
hay fever; autoimmune disease; systemic lupus erythematosus;
rheumatoid arthritis; myasthenia gravis; Graves' disease;
idiopathic thrombocytopenia purpura; haemolytic anaemia;
diabetes mellitus; psoriasis; hyper immunoglobulin E syndrome;
apoptosis; Rieger's syndrome; spondyloarthritis; Lyme disease; HIV;
syphilis; tuberculosis; arthritis; scleroderma; pulmonary fibrosis;
asbestosis; adult respiratory distress syndrome; pneumonia;
atherosclerosis; multiple sclerosis; glomerulonephritis;
glomerulocystitis; leprosy; malaria; Goodpasture's disease;
Henoch-Schoenlein purpura; polyarteritis; multiple myeloma;
Wegener's granulomatosis; cryoglobulinemia; amyloidosis; Sjogren's syndrome;
AIDS; oesophageal dysmotility; inflammatory bowel disease;
bladder disease; Epstein-Barr virus; mononucleosis; B cell tumour;
Burkitt's lymphoma; nasopharyngeal carcinoma; pneumonia;
gene therapy; diagnosis.
Homo sapiens.
XX

FH Key Location/Qualifiers
 FT Region 117..141
 FT /note= "zinc finger 1 (Zn binding to Cys-117,
 FT Cys-124, His-136 and Cys-141)"
 FT Region 148..170
 FT /note= "zinc finger 2 (zinc binding to Cys-148,
 FT Cys-153, His-165 and Cys-170)"
 FT Region 177..197
 FT /note= "zinc finger 3 (Zn binding to Cys-177,
 FT Cys-180, His-192 and Cys-197)"
 FT Region 204..225
 FT /note= "zinc finger 4 (Zn binding to Cys-204,
 FT Cys-208, His-221 and Cys-225)"
 FT Region 232..259
 FT /note= "zinc finger 5 (Zn binding to Cys-232,
 FT Cys-239, His-251 and 259-381)"
 XX WO9734473-A1.
 XX 25-SEP-1997.
 XX 21-MAR-1997: 97WO-US05076.
 XX 18-SEP-1996: 96US-0026584.
 XX 21-MAR-1996: 96US-0013820.
 XX 01-MAY-1996: 96US-0016626.
 XX 01-MAY-1996: 96US-0016659.
 XX (UYCO) UNIV COLUMBIA NEW YORK.
 XX Cleary AM, Frank DM, Lederman S;
 DR WPI: 1997-479907/44.
 DR N-PSDB: AAT90123.
 PT Protein comprising CRAF1-b domain capable of inhibiting CD40
 PT mediated cell activation - useful to treat conditions characterised
 PT by aberrant or unwanted level of CD40 mediated intracellular
 PT signalling
 PS Example 1; Fig 1D-0; 158bp; English.
 CC This polypeptide comprises a CRAF1 (TRAF-3) protein designated
 CC CRAF1-a or TRAF-3-p55, p55, CRAF1(p55) or CRAF1(p60).
 CC It is encoded by exons 4-13 of the human CRAF gene (see AAT90123).
 CC CRAF1-a is a signalling protein that interacts with the cytoplasmic
 CC tail of B cell surface molecule CD40 and mediates a variety of
 CC T-dependent effects on B cell activation and differentiation. A
 CC higher mol. wt. CRAF1, designated CRAF1b (see AAW27428), has also
 CC been identified, as well as isoforms p5 (see AAW27429), p15 (see
 CC AAW27430) and variants of CRAF-1a and CRAF-b (see AAW27432-37) that
 CC comprise different combinations of zinc fingers. CRAF1 peptides,
 CC comprising from 0-4 zinc finger domains, and nucleic acids encoding
 CC them, can be used to inhibit CD40 ligand activation of cells that
 CC express CD40 on their surface, particularly by introducing the
 CC nucleic acid molecule into the cells, useful to treat conditions
 CC characterised by an aberrant or unwanted level of CD40 mediated
 CC intracellular signalling, such as organ rejection, or a CD40
 CC dependent immune response in a subject receiving gene therapy. The
 CC condition may be an allergic response or an autoimmune response, or
 CC may be dependent on CD40 ligand-induced activation of epithelial
 CC cells, an inflammatory kidney disease, a smooth muscle cell-
 CC dependent disease, or a condition associated with Epstein-Barr
 CC virus.
 XX Sequence 568 AA:
 SQ
 Query Match 100.0%; Score 3008; DB 18; Length 568;
 Best Local Similarity 100.0%; Pred. No. 8e-239;
 Matches 568; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 MESSKKMDSFGALQTNPLKLTHTDRSAGTVPVPEOGGYKEKFKIVTEDEKCKCHLV 60
 I|||||

Db 1 MESSKKMDSFGALQTNPLKLTHTDRSAGTVPVPEOGGYKEKFKIVTEDEKCKCHLV 60
 QY 61 CSPKOTEGCHRPCESCMALLSSSSPKCTACQESTIVDKYFKDCKGCRREILADQYRNE 120
 Db 61 CSPKOTEGCHRPCESCMALLSSSSPKCTACQESTIVDKYFKDCKGCRREILADQYRNE 120
 QY 121 SRCGABQLTLGHLVHLKNDCHFEELPCVRPDCRKYLRKDLRPHVEKACYRATCSHC 180
 Db 121 SRCGABQLTLGHLVHLKNDCHFEELPCVRPDCRKYLRKDLRPHVEKACYRATCSHC 180
 QY 181 KSGVPMIALQKHEDDPCVWVSCPHKCSVCTILRSELASHLSECVNAPSTCSFKRYGCV 240
 Db 181 KSGVPMIALQKHEDDPCVWVSCPHKCSVCTILRSELASHLSECVNAPSTCSFKRYGCV 240
 QY 241 FQGTNOQIAKHAESAIVQVHNLKEMNSLEKRVSLONESVEYKKSIQSLHNOICSEI 300
 Db 241 FQGTNOQIAKHAESAIVQVHNLKEMNSLEKRVSLONESVEYKKSIQSLHNOICSEI 300
 QY 301 EIEROKEMLRNNESTKLHLQRYIDSQAEKLEKDEIRPFQRMWEADSMKSSVESLQNR 360
 Db 301 EIEROKEMLRNNESTKLHLQRYIDSQAEKLEKDEIRPFQRMWEADSMKSSVESLQNR 360
 QY 361 VTELESYDKSAGVARTGLLESQLSRHDQMLSVHDIRLADMDLRFQVLEFASVNGVLIW 420
 Db 361 VTELESYDKSAGVARTGLLESQLSRHDQMLSVHDIRLADMDLRFQVLEFASVNGVLIW 420
 QY 421 KIRDYKRRKQEAWVGKTLISQPFYTGFGYKMCARVILNDGKGGKTHLSLFYVIRG 480
 Db 421 KIRDYKRRKQEAWVGKTLISQPFYTGFGYKMCARVILNDGKGGKTHLSLFYVIRG 480
 QY 481 EYDALLPWPFQKQVTLMLMOGSSRRHLGAFDPDSSSFKKPIGEMNIASGCPYFAQ 540
 Db 481 EYDALLPWPFQKQVTLMLMOGSSRRHLGAFDPDSSSFKKPIGEMNIASGCPYFAQ 540
 QY 541 TYLENGTYIKDDTIFIKVIVDTSDLPDP 568
 Db 541 TYLENGTYIKDDTIFIKVIVDTSDLPDP 568
 RESULT 2
 ID AAY98166
 XX AAY98166 standard; Protein: 568 AA.
 AC AAY98166;
 XX 30-AUG-2000 (first entry)
 DT 30-AUG-2000 (first entry)
 DE Human TRAF3 protein sequence.
 XX Tumour necrosis factor receptor-associated factor; TRAF; human;
 KW antisense oligonucleotide; phosphorothioate; antiproliferative;
 KW anti-inflammatory; E-selectin; jun kinase.
 XX Homo sapiens.
 OS
 PN WO2000020435-A1.
 XX 13-APR-2000.
 PD 13-APR-2000.
 XX 05-OCT-1999: 99WO-US23171.
 PF 05-OCT-1999: 99WO-US23171.
 XX 06-OCT-1998: 98US-0167109.
 PR 06-OCT-1998: 98US-0167109.
 XX (ISIS-) ISIS PHARM INC.
 PA Baker BF, Cowsett LM, Monia BP, Xu XS;
 PI
 XX WPI: 2000-303732/26.
 DR N-PSDB: AAA5492.
 PT Antisense oligonucleotides targeted to nucleic acids encoding human
 PT tumour necrosis factor receptor-associated factor (TRAF), useful for
 PT treating diseases associated with TRAF expression such as inflammatory

PT diseases -
 XX
 PS Disclosure: Page 111-114; 170pp; English.
 CC The present invention relates to antisense oligonucleotides
 CC (see AA55496-A55757) which are targeted to nucleic acids encoding a
 CC human tumour necrosis factor receptor-associated factor (TRAF). The
 CC antisense sequences comprise at least one modified internucleotide
 CC linkage, which is a phosphorothioate linkage. The oligonucleotides also
 CC include at least one modified sugar moiety such as a 2'-O-methoxyethyl
 CC sugar moiety. Sequences AA55490-A55495 represent nucleotide sequences
 CC encoding human TRAF1-6, and sequences AA598164-Y98169 represent the
 CC TRAF1-6 amino acid sequences. Included in the invention is a method for
 CC treating a human having a disease associated with the expression of TRAF
 CC comprising administering an antisense oligonucleotide. The reduction of
 CC Jun kinase activation in cells comprises contacting the cells with an
 CC antisense oligonucleotide targeted to TRAF-6. A method for the reduction
 CC of E-selectin expression in cells or tissues comprises contacting the
 CC cells or tissues with an antisense oligonucleotide targeted to TRAF-2 or
 CC TRAF-6. The antisense oligonucleotides have antiproliferative and
 CC anti-inflammatory activity and are useful for treating disorders
 CC associated with cell proliferation and inflammation. The antisense
 CC oligonucleotides may also be used as a diagnostic probe for studying
 CC gene function.
 CC
 XX
 XX
 SQ Sequence 568 AA:
 Query Match 100.0%; Score 3008; DB 21; Length 568;
 Best Local Similarity 100.0%; Pred. No. 8e-239;
 Matches 568; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Oy 1 MESSKKMDSFGALQTNPLKLTDRSAGTPVPFPEGGKKEKVKVTEVDKCKECHKVL 60
 Db 1 MESSKKMDSFGALQTNPLKLTDRSAGTPVPFPEGGKKEKVKVTEVDKCKECHKVL 60
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 Db 61 CSPKQTECGHRCESGMAALLSSSPKCTACQESIVKDKVFENCKREIILALQIYCHNE 120
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 Db 121 SSGCAEOLTLGHLVHLKNDCHFEEELPCVPRPCKEYVLRKDLRDHVEAKCKREATGSHC 180
 Oy 181 KSOVPMIALQKHEDTDCPCVVVSCPHKCSVOTLLRSELSAHSECVNAPSTCSFRYGCY 240
 Db 181 KSOVPMIALQKHEDTDCPCVVVSCPHKCSVOTLLRSELSAHSECVNAPSTCSFRYGCY 240
 Oy 241 FPGTNOQIKAHBASSAVOHVNLKEMSNLSLEKVSLLQNESYEKKNSIOSLHNOICSEFI 300
 Db 241 FPGTNOQIKAHBASSAVOHVNLKEMSNLSLEKVSLLQNESYEKKNSIOSLHNOICSEFI 300
 Oy 301 EIEROKEMIRNNEKTIHLQRYIDSOAEKLELDEIRPFQNMEDASMSKSSVESLONR 360
 Db 301 EIEROKEMIRNNEKTIHLQRYIDSOAEKLELDEIRPFQNMEDASMSKSSVESLONR 360
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 Db 361 VTELESVDKSAQOVARNTGLESOLSRHDOMLSVDIRLADMDLFEVYLEASTVAGVLIW 420
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 Db 421 KTRDYKRRKQEAVMGKTLISYQPFYTGFGYKMCARVYLYNGDGNGKSTHLSLFEVIRG 480
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 Db 481 EVDALLPWFKQKVTLMMDGSSRRHIGDAFKPPNPNSSFRKPGEMNIAISGCPVFAAQ 540
 Oy 541 TVLENGTYIKDDTIFIKYIVPTSDLPDP 568
 Db 541 TVLENGTYIKDDTIFIKYIVPTSDLPDP 568

AA017757
 ID AA017757 standard; protein; 568 AA.
 XX
 AC AA017757;
 XX
 DT 15-AUG-2002 (first entry)
 XX
 DE Human CD40 receptor-associated factor 1 (CRAFL).
 XX
 XX Human; CD40 receptor-associated factor 1; CRAFL; organ rejection;
 KW autoimmune disease; apoptosis; infection; fibrosis; liver disease;
 KW kidney disease; vascular disease; gastrointestinal disease; vasotropic;
 KW immunosuppressive; antiinflammatory; nephrotic; antiallergic;
 KW antianemic; anti-thyroid; antineumatic; antiarthritis; cardiant;
 KW dematological; haemostatic; antidiabetic; antiarteriosclerotic;
 KW antiporiatic; bladder disease; human herpesvirus 4; Epstein-Barr virus.
 OS Homo sapiens.
 XX
 PN US2002031522-A1.
 XX
 PD 14-MAR-2002.
 XX
 XX 10-MAR-1997; 97US-0813323.
 PF 11-MAR-1996; 96US-013199P.
 XX
 PA (BALV/) BALTIMORE D.
 PA (CHEN/) CHENG G.
 PA (YEZ/) YE Z.
 PA (LEDE/) LEDERMAN S.
 PA (CLEA/) CLEARY A.
 XX
 XX Baltimore D, Cheng G, Ye Z, Lederman S, Cleary A;
 PI WPI: 2002-451449/48.
 DR N-PSID: AAL46793.
 XX
 PT New CD40 receptor-associated factor 1 capable of inhibiting
 PT CD40-mediated cell activation, useful for treating e.g. inflammatory
 PT diseases, autoimmune diseases, allergic reaction, or organ transplant
 PT rejection
 XX
 PS Disclosure: Fig.1; 31pp; English.
 XX
 CC The present invention relates to a protein comprising a CD40 receptor-
 CC associated factor 1 (CRAFL) truncated by about 323 - 414 amino acid
 CC residues at the amino terminus, or its variant, which is capable of
 CC inhibiting CD40-mediated cell activation. The protein is useful for
 CC treating a condition characterised by an aberrant or unwanted level of
 CC CD40-mediated intracellular signaling, such as: organ rejection,
 CC autoimmune diseases such as Rheumatoid arthritis, myasthenia gravis,
 CC systemic lupus erythematosus, Grave's disease, idiopathic
 CC thrombocytopenia purpura, haemolytic anaemia, or diabetes mellitus, an
 CC allergic response (e.g. hay fever or a penicillin allergy), a condition
 CC dependant on CD40 ligand-induced activation of fibroblast cells (e.g.
 CC arthritis, scleroderma, or fibrosis), a condition dependant on CD40-
 CC ligand-induced activation of endothelial cells (e.g. atherosclerosis,
 CC reperfusion injury, allograft rejection, organ rejection, or chronic
 CC inflammatory autoimmune diseases, a condition dependant on CD40
 CC ligand-induced activation of epithelial cell, specifically keratinocytes
 CC (e.g. psoriasis), or an inflammatory kidney disease (e.g. membranous
 CC glomerulonephritis), minimal change disease/acute tubular necrosis, pauci-
 CC immune glomerulonephritis, or focal segmental glomerulosclerosis). The
 CC present sequence is the human CRAFL protein.
 XX
 SQ Sequence 568 AA:
 Query Match 100.0%; Score 3008; DB 21; Length 568;
 Best Local Similarity 100.0%; Pred. No. 8e-239;
 Matches 568; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Oy 1 MESSKKMDSFGALQTNPLKLTDRSAGTPVPFPEGGKKEKVKVTEVDKCKECHKVL 60

Db 1 MESSKNDSPGALQTNPLKLTHTDRSAGTVPVPEGGYGEKPKVYEDKXCEKCHLV 60
 QY 61 CSPKQTECGHRCFESCAALLSSSPKCTACQESYKDKYFKONCKRELLAQIYCRNE 120
 Db 61 CSPKQTECGHRCFESCAALLSSSPKCTACQESYKDKYFKONCKRELLAQIYCRNE 120
 QY 121 SRGAEOLTLGHLVHLKNCHEELPCVPRDCKEKLRLDHDHEKACKYREATCSHC 180
 Db 121 SRGAEOLTLGHLVHLKNCHEELPCVPRDCKEKLRLDHDHEKACKYREATCSHC 180
 QY 181 KSGVPMALOKHEDTDCPCVVVSCPHKCSYQTLRLSELNAHLESCVNAPESTCSFKRYGCV 240
 Db 181 KSGVPMALOKHEDTDCPCVVVSCPHKCSYQTLRLSELNAHLESCVNAPESTCSFKRYGCV 240
 QY 241 FQGTNOQIKAHESAVQHVNLKEMNSLEKRVSLLONESVEKNKSIGSLHNOICSEFI 300
 Db 241 FQGTNOQIKAHESAVQHVNLKEMNSLEKRVSLLONESVEKNKSIGSLHNOICSEFI 300
 QY 301 EIEROKEMLNNEKSLILHQRVIDSOAEKLELDEKREPROROMWEADSKSSVESLONR 360
 Db 301 EIEROKEMLNNEKSLILHQRVIDSOAEKLELDEKREPROROMWEADSKSSVESLONR 360
 QY 361 VTELESYDKSAGVARTGLESOLSRHDOMLSVHDIRLADMDLRFQVLETASYNGVLIW 420
 Db 361 VTELESYDKSAGVARTGLESOLSRHDOMLSVHDIRLADMDLRFQVLETASYNGVLIW 420
 QY 421 KIRDYKRRKQEAVMGKTLISYQPFYTGFGYKMCARVYINGOMGKGTLSLFFYIMRG 480
 Db 421 KIRDYKRRKQEAVMGKTLISYQPFYTGFGYKMCARVYINGOMGKGTLSLFFYIMRG 480
 QY 481 EYDALPMPFKQVYTLMLMDOGSSRRHLGDAFPPDPNSSFFKKPTGEMNIAACCPFVAQ 540
 Db 481 EYDALPMPFKQVYTLMLMDOGSSRRHLGDAFPPDPNSSFFKKPTGEMNIAACCPFVAQ 540
 QY 541 TVLENGTYIKDDTIFIKVIVDTSIDLPDP 568
 Db 541 TVLENGTYIKDDTIFIKVIVDTSIDLPDP 568
 RESULT 4
 AAW27428
 ID AAW27428 standard; Protein; 690 AA.
 AC AAW27428;
 XX
 DT 27-MAR-1998 (first entry)
 XX
 DE Human CRAF1-b (TRAF-3-p70) polypeptide.
 XX
 KW CD40 receptor associated factor 1; CRAF1-b; TRAF-3; p70; human;
 KW CD40 mediated intracellular signalling; organ rejection; allergy;
 KW hay fever; autoimmune disease; systemic lupus erythematosus;
 KW rheumatoid arthritis; myasthenia gravis; Graves' disease;
 KW idiopathic thrombocytopenia purpura; haemolytic anaemia;
 KW diabetes mellitus; psoriasis; hyper immunoglobulin E syndrome;
 KW apoptosis; Rieger's syndrome; spondylarthritis; Lyme disease; HIV;
 KW syphilis; tuberculosis; arthritis; scleroderma; pulmonary fibrosis;
 KW pneumococcosis; adult respiratory distress syndrome; pneumonitis;
 KW babesiosis; silicosis; Farmer's lung; hepatitis; cirrhosis;
 KW atherosclerosis; multiple sclerosis; glomerulonephritis;
 KW glomerulonephritis; glomerulopathy; kidney disease; nephropathy;
 KW endocarditis; leprosy; malaria; Goodpasture's disease;
 KW Henoch-Schoenlein purpura; polyarteritis; multiple myeloma;
 KW Wegener's granulomatosis; cryoglobulinemia;
 KW Waldenstrom's macroglobulinemia; amyloidosis; Sjogren's syndrome;
 KW AIDS; oesophageal dysmotility; inflammatory bowel disease;
 KW bladder disease; Epstein-Barr virus; mononucleosis; B cell tumour;
 KW Burkitt's lymphoma; nasopharyngeal carcinoma; pneumonia;
 KW gene therapy; diagnosis.
 XX
 OS Homo sapiens.
 XX

FH Key Location/Qualifiers
 FT Domain 52..122
 FT /label= "CRAF-b domain
 FT /note= "Claim 1"
 FT Region 239..263
 FT /note= "zinc finger 1 (2n binding to Cys-239,
 FT Cys-246, His-258 and Cys-263)"
 FT Region 270..292
 FT /note= "zinc finger 2 (zinc binding to Cys-270,
 FT Cys-275, His-287 and Cys-292 "
 FT Region 299..319
 FT /note= "zinc finger 3 (2n binding to Cys-299,
 FT Cys-302, His-314 and Cys-319"
 FT Region 354..381
 FT /note= "zinc finger 4 (2n binding to Cys-326,
 FT Cys-330, His-343 and Cys-347)"
 FT Region 354..381
 FT /note= "zinc finger 5 (2n binding to Cys-354,
 FT Cys-361, His-373 and His-381"
 FT Binding-site 16..19
 FT /note= "putative SH3 binding motif"
 FT Binding-site 44..47
 FT /note= "putative SH3 binding motif"
 FT Binding-site 103..110
 FT /note= "putative SH3 binding motif"
 PN MO9734473-A1.
 XX 25-SEP-1997.
 PD 21-MAR-1997;
 PF 97WO-US05076.
 PE 18-SEP-1996;
 PR 96US-0026584.
 PR 21-MAR-1996;
 PR 96US-0013820.
 PR 01-MAY-1996;
 PR 96US-0016626.
 PR 01-MAY-1996;
 PR 96US-0016659.
 PA (UYCO) UNIV COLUMBIA NEW YORK.
 XX
 PI Cleary AM, Frank DM, Lederman S;
 DR WPI. 1997-479907/44.
 DR N-PSDB: AAT90123.
 XX
 PT Protein comprising CRAF1-b domain capable of inhibiting CD40
 PT mediated cell activation - useful to treat conditions characterised
 PT by aberrant or unwanted level of CD40 mediated intracellular
 PT signalling
 PS Example 1; Fig 1A-O; 158bp; English.
 XX
 PS This polypeptide comprises a CRAF1 (TRAF-3) protein designated
 CC CRAF1-b or TRAF-3-p70 or p70 or CRAF1(p70) or TRAF-3(p70). It
 CC is encoded by exons 1-2 and 4-13 of the human CRAF gene (see
 CC AAT90123). A lower mol.wt. CRAF1, designated CRAF1a (see AAW27431), has
 CC also been identified, as well as isoforms p5 (see AAW27429), p15 (see
 CC AAW27430) and variants of CRAF-1a and CRAF-b (see AAW27432-37) that
 CC comprise different combinations of zinc fingers. CRAF1 peptides,
 CC comprising from 0-4 zinc finger domains, and nucleic acids encoding
 CC them, can be used to inhibit CD40 ligand activation of cells that
 CC express CD40 on their surface, particularly by introducing the
 CC nucleic acid molecule into the cells, useful to treat conditions
 CC characterised by an aberrant or unwanted level of CD40 mediated
 CC intracellular signalling, such as organ rejection, or a CD40
 CC dependent immune response in a subject receiving gene therapy. The
 CC condition may be an allergic response or an autoimmune response, or
 CC may be dependent on CD40 ligand-induced activation of epithelial
 CC cells, an inflammatory kidney disease, a smooth muscle cell-
 CC dependent disease, or a condition associated with Epstein-Barr
 CC virus.
 XX
 SO Sequence 690 AA.

Query Match 100.0%; Score 3008; DB 18; Length 690;
 Best Local Similarity 100.0%; Pred. No. 1.1e-238;
 Matches 568; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MESSKKMDSFGALQTNPLKHTDRSAGTPVPEEGGKYEKFKVTEDEKCKCHLVL 60
 DB 123 MESSKKMDSFGALQTNPLKHTDRSAGTPVPEEGGKYEKFKVTEDEKCKCHLVL 182
 QY 61 CSPKQTECGHRCFESCMALLSSSSPKCTACQESIVKDKVFKDNCCKREILALQIYCRNE 120
 DB 183 CSPKQTECGHRCFESCMALLSSSSPKCTACQESIVKDKVFKDNCCKREILALQIYCRNE 242
 QY 121 SRGCAEQLTGLHLVHLKNDCHFEELPCVRPDCKEKYLKRDLDHVEKACKYREATCSHC 180
 DB 243 SRGCAEQLTGLHLVHLKNDCHFEELPCVRPDCKEKYLKRDLDHVEKACKYREATCSHC 302
 QY 181 KSOVPMIALQKHEDTDCPCVAVSCPHKCSVQTLRLSELSAHLSECVNAPSTCSFRKRGCV 240
 DB 303 KSOVPMIALQKHEDTDCPCVAVSCPHKCSVQTLRLSELSAHLSECVNAPSTCSFRKRGCV 362
 QY 241 FOGTNOQITKAHEASAVQHVNLKEMSNLEKRYSLQNESEKKNKSIOSLHNOICFEEI 300
 DB 363 FOGTNOQITKAHEASAVQHVNLKEMSNLEKRYSLQNESEKKNKSIOSLHNOICFEEI 422
 QY 301 EIEROKEMLRNNEKSIHLQRYIDSQAEKLELDEKRIEPRFQWMEADSMKSSVESLQNR 360
 DB 423 EIEROKEMLRNNEKSIHLQRYIDSQAEKLELDEKRIEPRFQWMEADSMKSSVESLQNR 482
 QY 361 VTELESVDSKAGAVARNTGLLESQSLSRHDQMLSVHDIRLADMDLRFOVLETAASYNGVLIM 420
 DB 483 VTELESVDSKAGAVARNTGLLESQSLSRHDQMLSVHDIRLADMDLRFOVLETAASYNGVLIM 542
 QY 421 KIRDYRRRKOEAVMGKTLISYOPFTYGFYGYKMCARVYLNDGDMGKGTHTLSLFFVIMRG 480
 DB 543 KIRDYRRRKOEAVMGKTLISYOPFTYGFYGYKMCARVYLNDGDMGKGTHTLSLFFVIMRG 602
 QY 481 EYDALLPWPFPKQKVTLMIMDOGSSRRHLGDAFKPDPNSSSFKKPTGEMNITASGCPVFAQ 540
 DB 603 EYDALLPWPFPKQKVTLMIMDOGSSRRHLGDAFKPDPNSSSFKKPTGEMNITASGCPVFAQ 662
 QY 541 TVLENGTIRKDDTIFIKYIVDTSLDPP 568
 DB 663 TVLENGTIRKDDTIFIKYIVDTSLDPP 690

RESULT 5
 AAM03146
 ID AAM03146 standard; Protein: 568 AA.
 AC AAM03146;
 DT 23-OCT-1996 (first entry)
 XX
 DE LMP1 associated protein LMP1.
 XX
 KW LMP1; LMP1 associated protein 1; latent infection membrane protein;
 KW tumour necrosis factor receptor associated factor; TRAF;
 KW signal transduction; TNF; TNFR; lymphoblast; tumorigenesis; AIDS;
 KW Hodgkin's disease; Burkitt's lymphoma; nasopharyngeal carcinoma;
 KW mononucleosis; Epstein-Barr virus; EBV; therapy.
 XX
 OS Homo sapiens.
 XX
 FT Key Location/Qualifiers
 FT Domain 245..568
 FT /label= LMP1-Blinding_domain
 FT Domain 309..341
 FT /label= Coiled-coil_domain
 FT Domain 406..568
 FT /label= Carboxy-terminal domain
 XX
 PN W09620723-A1.
 XX

PD 11-JUL-1996.
 XX
 PF 28-DEC-1995; 95MO-US16980.
 XX
 XX 30-DEC-1994; 94US-0367540.
 XX
 PA (BGHM) BRIGHAM & WOMEN'S HOSPITAL.
 XX (REGC) UNIV CALIFORNIA.
 PI Birkenbach M, Kaye KM, Kleef E, Mostalos G, Vanarsdale T;
 PI Ware C;
 XX
 XX WPI: 1996-333765/33.
 DR N-PSDB: AAT31273.
 XX
 PT Compounds and methods for controlling TRAF-mediated signals - by
 PT medulating interactions between Epstein Barr virus encoded proteins
 PT LMP1, LMP1, TNF, TNFR to inhibit lymphoblast growth and
 PT tumorigenesis.
 XX
 PS Claim 74; Page 58-60; 87pp; English.
 CC A novel human B-cell protein (AAM03146), termed LMP1 associated protein
 CC 1 or LMP1, strongly associates with the cytoplasmic C-terminal domain
 CC (AAM03148) of Epstein-Barr virus (EBV) latent infection membrane protein
 CC 1 (LMP1), a domain that is stringently required for transformed cell
 CC growth. LMP1 is related to murine tumour necrosis factor receptor
 CC associated factor TRAF2. A related novel B-cell protein (AAM03147),
 CC EB16, appears to be the human homologue of murine TRAF1. LMP1
 CC polypeptides, esp. the LMP1 binding domain, coiled coil domain and
 CC C-terminal domain can be used to inhibit LMP1-TRAF interaction.
 CC Such polypeptides, which may be optd. by recombinant means (see
 CC also AAT31273) can be used to treat infection and control cell growth
 CC or tumorigenesis associated with LMP1-encoding viruses, partic. EBV.
 CC
 XX
 SQ Sequence 568 AA:

Query Match 99.8%; Score 3002; DB 17; Length 568;
 Best Local Similarity 99.8%; Pred. No. 2.5e-238;
 Matches 567; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MESSKKMDSFGALQTNPLKHTDRSAGTPVPEEGGKYEKFKVTEDEKCKCHLVL 60
 DB 1 MESSKKMDSFGALQTNPLKHTDRSAGTPVPEEGGKYEKFKVTEDEKCKCHLVL 60
 QY 61 CSPKQTECGHRCFESCMALLSSSSPKCTACQESIVKDKVFKDNCCKREILALQIYCRNE 120
 DB 61 CSPKQTECGHRCFESCMALLSSSSPKCTACQESIVKDKVFKDNCCKREILALQIYCRNE 120
 QY 121 SRGCAEQLTGLHLVHLKNDCHFEELPCVRPDCKEKYLKRDLDHVEKACKYREATCSHC 180
 DB 121 SRGCAEQLTGLHLVHLKNDCHFEELPCVRPDCKEKYLKRDLDHVEKACKYREATCSHC 180
 QY 181 KSOVPMIALQKHEDTDCPCVAVSCPHKCSVQTLRLSELSAHLSECVNAPSTCSFRKRGCV 240
 DB 181 KSOVPMIALQKHEDTDCPCVAVSCPHKCSVQTLRLSELSAHLSECVNAPSTCSFRKRGCV 240
 QY 241 FOGTNOQITKAHEASAVQHVNLKEMSNLEKRYSLQNESEKKNKSIOSLHNOICFEEI 300
 DB 241 FOGTNOQITKAHEASAVQHVNLKEMSNLEKRYSLQNESEKKNKSIOSLHNOICFEEI 300
 QY 301 EIEROKEMLRNNEKSIHLQRYIDSQAEKLELDEKRIEPRFQWMEADSMKSSVESLQNR 360
 DB 301 EIEROKEMLRNNEKSIHLQRYIDSQAEKLELDEKRIEPRFQWMEADSMKSSVESLQNR 360
 QY 361 VTELESVDSKAGAVARNTGLLESQSLSRHDQMLSVHDIRLADMDLRFOVLETAASYNGVLIM 420
 DB 361 VTELESVDSKAGAVARNTGLLESQSLSRHDQMLSVHDIRLADMDLRFOVLETAASYNGVLIM 420
 QY 421 KIRDYRRRKOEAVMGKTLISYOPFTYGFYGYKMCARVYLNDGDMGKGTHTLSLFFVIMRG 480
 DB 421 KIRDYRRRKOEAVMGKTLISYOPFTYGFYGYKMCARVYLNDGDMGKGTHTLSLFFVIMRG 480

OY 481 EYDALLPMPFKOKVTLMMDGSSRRHLDARFDPDSSFFKPTGEMNIASGCPYFAO 540
 DB 481 EYDALLPMPFKOKVTLMMDGSSRRHLDARFDPDSSFFKPTGEMNIASGCPYFAO 540
 OY 541 TVLENGTYIKDDTIFIKVIYDTSDDLDP 568
 DB 541 TVLENGTYIKDDTIFIKVIYDTSDDLDP 568
 RESULT 6
 AAB67615
 ID AAB67615 standard; Protein: 567 AA.
 AC AAB67615;
 XX
 DT 29-MAY-2001 (first entry)
 XX
 DE Amino acid sequence of human CD40 ligand.
 XX
 KW CD40 ligand; osteoblast cell death; apoptosis; bone loss;
 KW osteoporosis; osteonecrosis; inflammatory arthritis; estrogen loss;
 KW ovariectomy; histiocyte; lupus nephritis; Takayasu's arteritis;
 KW Wegener's granulomatosis; nephritis; myositis; scleroderma;
 KW thrombocytopenia; asthma; lung disease; cancer.
 XX
 OS Homo sapiens.
 XX
 PN WO200116180-A2.
 PD 08-MAR-2001.
 XX
 PF 24-AUG-2000; 2000WO-US23276.
 XX
 PR 27-AUG-1999; 99US-0151250.
 XX
 PA (TEXA) UNIV TEXAS SYSTEM.
 XX
 PI Ahuja SS, Bonewald LF;
 XX
 DR WPI: 2001-169007/17.
 DR N-PSDB; AAF55540.
 XX
 PT CD40 agonist containing composition, used to reduce bone cell death or
 PT apoptosis associated with osteoporosis, osteonecrosis and inflammatory
 PT arthritis -
 XX
 PS Disclosure; Page 116-118; 118pp; English.
 XX
 CC The present sequence represents a human CD40 ligand. CD40 ligands are
 CC used for reducing osteoblast cell death or apoptosis, and for treating
 CC or preventing bone loss in animals, preferably humans, at risk of,
 CC or undergoing, bone loss. The bone loss is associated with osteoporosis,
 CC osteonecrosis, inflammatory arthritis, post-menopausal estrogen loss,
 CC estrogen loss due to ovariectomy, total hysterectomy, lupus nephritis,
 CC Takayasu's arteritis, Wegener's granulomatosis, anti-glomerular basement
 CC membrane nephritis, myositis, scleroderma, idiopathic autoimmune
 CC thrombocytopenia, asthma, a chronic obstructive lung disease,
 CC nephrotic/nephritic syndrome, or cancer. They may also be used to
 CC treat or prevent bone loss in a subject undergoing, or scheduled for,
 CC an organ or bone marrow transplant.
 CC
 XX
 SQ Sequence 567 AA:
 Query Match 99.1%; Score 2980.5; DB 22; Length 567;
 Best Local Similarity 99.5%; Pred. No. 1.5e-236;
 Matches 565; Conservative 0; Mismatches 2; Indels 1; Gaps 1;
 OY 1 MESSKMDSPGALQTNPIKLTHTDRSAGTPVPEQGGYKKEFKVKEVDEKRYCECHLV 60
 DB 1 MESSKMDSPGALQTNPIKLTHTDRSAGTPVPEQGGYKKEFKVKEVDEKRYCECHLV 60
 OY 61 CSPKQTEGHRFCESCMALLSSSPKCTACQESTIVKRVKFNDCCKREITLALQIYCRNE 120
 DB 61 CSPKQTEGHRFCESCMALLSSSPKCTACQESTIVKRVKFNDCCKREITLALQIYCRNE 120

DB 61 CSPKQTEGHRFCESCMALLSSSPKCTACQESTIVKRVKFNDCCKREITLALQIYCRNE 120
 OY 121 SRGAEQLTLGHLVHLKNOCHFEELPCVPRDCEKYLARDLRDHYKACKYREATCSHC 180
 DB 121 SRGAEQLTLGHLVHLKNOCHFEELPCVPRDCEKYLARDLRDHYKACKYREATCSHC 179
 OY 181 KSOYPMIALOKHEPTDCPCVAVSCPHKCSVQTLRLSELASHLSECVAPSTCSFKRYGCV 240
 DB 181 KSOYPMIALOKHEPTDCPCVAVSCPHKCSVQTLRLSELASHLSECVAPSTCSFKRYGCV 239
 OY 241 FQGTNQQIKAHESAAVOHVNLKEMNSLEKKVSLQNESVEKNKSIOSLHNOICFEEI 300
 DB 241 FQGTNQQIKAHESAAVOHVNLKEMNSLEKKVSLQNESVEKNKSIOSLHNOICFEEI 299
 OY 301 EIEROKEMLRNNESEKTLHLQVVIDSOAEKLELDKEIRPPROMNEEADSKSSVESIQNR 360
 DB 301 EIEROKEMLRNNESEKTLHLQVVIDSOAEKLELDKEIRPPROMNEEADSKSSVESIQNR 359
 OY 361 VTELESVDKSAGVARNITGLLESQLSRHDQMLSVHDIRLADMQLRFOVLETASYNGVLIW 420
 DB 361 VTELESVDKSAGVARNITGLLESQLSRHDQMLSVHDIRLADMQLRFOVLETASYNGVLIW 419
 OY 421 KIRDYKRRKQAVMGKTLISLISOPFTYGYRGYKACAVYILNGDMGKGTLSLFEVIMRG 480
 DB 421 KIRDYKRRKQAVMGKTLISLISOPFTYGYRGYKACAVYILNGDMGKGTLSLFEVIMRG 479
 OY 481 EYDALLPMPFKOKVTLMMDGSSRRHLDARFDPDSSFFKPTGEMNIASGCPYFAO 540
 DB 481 EYDALLPMPFKOKVTLMMDGSSRRHLDARFDPDSSFFKPTGEMNIASGCPYFAO 539
 OY 541 TVLENGTYIKDDTIFIKVIYDTSDDLDP 568
 DB 541 TVLENGTYIKDDTIFIKVIYDTSDDLDP 567
 RESULT 7
 AAR99259
 ID AAR99259 standard; Protein: 567 AA.
 AC AAR99259;
 XX
 DT 06-DEC-1996 (first entry)
 XX
 DE Full-length CD40 binding protein.
 XX
 KW CD40 binding protein; CD40bp; immunosuppressive; immune disorder;
 KW antibody; therapy.
 XX
 OS Homo sapiens.
 XX
 FH Key Location/Qualifiers
 FT Domain 49..97
 FT /label= RING_finger_domain
 FT Domain 266..376
 FT /label= Coiled-coil_domain
 XX
 PN W09628568-A1.
 PD 19-SEP-1996.
 XX
 PF 24-MAY-1995; 95WO-US06623.
 XX
 PR 13-MAR-1995; 95US-0404832.
 XX
 PA (UNMI) UNIV MICHIGAN.
 XX
 PI Dixit VM;
 XX
 DR WPI: 1996-433838/43.
 DR N-PSDB; AAT35251.
 XX
 PT New isolated CD40 receptor binding protein - used to develop prods.
 PT for use as immunosuppressive drugs and to treat immune disorders

XX Example 5; Page 41-43; 65pp; English.

XX A novel human CD40 receptor binding protein (CD40bp) (AAR99259) has

CC the ability to bind the cytoplasmic region of the CD40 receptor.

CC Its amino acid sequence was deduced from a cDNA clone (AAT35251).

CC cDNA from a human B-cell cDNA expression library using a yeast

CC two-hybrid system. Recombinant CD40bp can be produced in

CC prokaryotic or eukaryotic host cells. It can be utilised in the

CC purification of CD40 receptors or the detection of CD40 in cell or

CC tissue samples. It is also useful as an immunogen for prodn. of

CC anti-CD40bp antibodies, and can be used in an *in vitro* assay

CC system to screen for immunosuppressant drugs.

XX Sequence 567 AA;

SQ

Query Match 98.8%; Score 2970.5; DB 17; Length 567;

Best Local Similarity 99.3%; Pred. No. 9.8e-236;

Matches 564; Conservative 0; Mismatches 3; Indels 1; Gaps 1;

QY 1 MESSKKMDSPGALQTPPLKLTHTDRSAGTPVPEEGGYKEKFKVTEDEKXCEKCHLV 60

DB 1 MESSKKMDSPGALQTPPLKLTHTDRSAGTPVPEEGGYKEKFKVTEDEKXCEKCHLV 60

QY 61 CSPKQTECGHRCESCMALLSSSPKCTACQESIYKRVFKNCKREITLQIYCRNE 120

DB 61 CSPKQTECGHRCESCMALLSSSPKCTACQESIYKRVFKNCKREITLQIYCRNE 120

QY 121 SRGCAQLTLGHLVHLKNDCHFEELPCVRPCKEVLKLDLDRHYEAKCKREATCSHC 180

DB 121 SRGCAQLTLGHLVHLKNDCHFEELPCVRPCKEVLKLDLDRHYEAKCKREATCSHC 179

QY 181 KSOVPMTALQKHEDTDCPCVVVSCPHKCSVQTLNSELSELSAHSECVNAPSTCSFRYGCY 240

DB 180 KSOVPMTALQKHEDTDCPCVVVSCPHKCSVQTLNSELSELSAHSECVNAPSTCSFRYGCY 239

QY 241 FCGTNOITAHKSSAVQVHNLIKESNSLEKVKVSLLONESYEKKKSIOSLHNOICSEFI 300

DB 240 FCGTNOITAHKSSAVQVHNLIKESNSLEKVKVSLLONESYEKKKSIOSLHNOICSEFI 299

QY 301 ETEROKEMLRNNEKSLIHLQRYDSQAEKLEKLEIRFRONMEADSMKSSVESLQNR 360

DB 300 ETEROKEMLRNNEKSLIHLQRYDSQAEKLEKLEIRFRONMEADSMKSSVESLQNR 359

QY 361 VTELESVDKSAQAVARNTGLLESQSRHDQMLSVHDIRLADMDLRFQVLETASYNGVLIW 420

DB 360 VTELESVDKSAQAVARNTGLLESQSRHDQMLSVHDIRLADMDLRFQVLETASYNGVLIW 419

QY 421 KTRDYKRRKQEAVMKKTLSYQPPYTGFGYKMCARYVLANGDGKGTSLFVYIMRG 480

DB 420 KTRDYKRRKQEAVMKKTLSYQPPYTGFGYKMCARYVLANGDGKGTSLFVYIMRG 479

QY 481 EYDALPMPFKQKVTLMMDQSSRRHGDAPFPNNSSPFKPGENNTASGCVFPAQ 540

DB 480 EYDALPMPFKQKVTLMMDQSSRRHGDAPFPNNSSPFKPGENNTASGCVFPAQ 539

QY 541 TVLENGYVYIKDDTIFIKVIYVDTSLDLP 568

DB 540 TVLENGYVYIKDDTIFIKVIYVDTSLDLP 567

RESULT 8

AAOI7756

ID AAOI7756 standard; protein: 567 AA.

XX AAOI7756;

AC

XX 15-AUG-2002 (first entry)

DT

XX Murine CD40 receptor-associated factor 1 (CRAF1).

DE

XX Mouse; CD40 receptor-associated factor 1; CRAF1; organ rejection;

KW autoimmune disease; apoptosis; infection; fibrosis; liver disease.

KW kidney disease; vascular disease; gastrointestinal disease; vasotropic;

KW immunosuppressive; antiinflammatory; nephrotic; anti-allergic;

KW antianemic; anti-thyroid; antirheumatic; antiarthritis; cardiant;

KW dermatological; haemostatic; antidiabetic; antiatherosclerotic;

KW antipsoriatic; bladder disease; human herpesvirus 4; Epstein-Barr virus.

OS Mus sp.

PN US2002031522-A1.

PD 14-MAR-2002.

XX 10-MAR-1997; 97US-0813323.

PF 11-MAR-1996; 96US-013199P.

PR

XX (BALTY) BALTIMORE D.

PA (CHEN) CHENG G.

PA (YEZ) YE Z.

PA (LEDE) LEDERMAN S.

PA (CLEA) CLEARY A.

PI Baltimore D, Cheng G, Ye Z, Lederman S, Cleary A;

DR WPI: 2002-451449/48.

XX N-PSDB: AAL46792.

XX

PT New CD40 receptor-associated factor 1 capable of inhibiting

PT CD40-mediated cell activation, useful for treating e.g. inflammatory

PT diseases, autoimmune diseases, allergic reaction, or organ transplant

PT rejection

XX

PS Disclosure: Fig 1; 31pp; English.

XX

CC The present invention relates to a protein comprising a CD40 receptor-

CC associated factor 1 (CRAF1) truncated by about 323 - 414 amino acid

CC residues at the amino terminus, or its variant, which is capable of

CC inhibiting CD40-mediated cell activation. The protein is useful for

CC treating a condition characterised by an aberrant or unwanted level of

CC CD40-mediated intracellular signalling, such as: organ rejection,

CC autoimmune diseases such as rheumatoid arthritis, myasthenia gravis,

CC systemic lupus erythematosus, Grave's disease, idiopathic

CC thrombocytopenia purpura, haemolytic anaemia, or diabetes mellitus, an

CC allergic response (e.g. hay fever or a penicillin allergy), a condition

CC dependant on CD40 ligand-induced activation of fibroblast cells (e.g.

CC arthritis, scleroderma, or fibrosis), a condition dependant on CD40-

CC ligand-induced activation of endothelial cells (e.g. atherosclerosis,

CC reperfusion injury, allograft rejection, organ rejection, or chronic

CC inflammatory autoimmune diseases, a condition dependant on CD40

CC ligand-induced activation of epithelial cells, specifically keratinocytes

CC (e.g. psoriasis), or an inflammatory kidney disease (e.g. membranous

CC glomerulonephritis, minimal change disease/acute tubular necrosis, pauci-

CC immune glomerulonephritis, or focal segmental glomerulosclerosis). The

CC present sequence is the murine CRAF1 protein.

XX

SQ Sequence 567 AA;

Query Match 96.0%; Score 2886.5; DB 23; Length 567;

Best Local Similarity 96.1%; Pred. No. 8.1e-229;

Matches 546; Conservative 7; Mismatches 14; Indels 1; Gaps 1;

QY 1 MESSKKMDSPGALQTPPLKLTHTDRSAGTPVPEEGGYKEKFKVTEDEKXCEKCHLV 60

DB 1 MESSKKMDSPGALQTPPLKLTHTDRSAGTPVPEEGGYKEKFKVTEDEKXCEKCHLV 59

QY 61 CSPKQTECGHRCESCMALLSSSPKCTACQESIYKRVFKNCKREITLQIYCRNE 120

DB 60 CSPKQTECGHRCESCMALLSSSPKCTACQESIYKRVFKNCKREITLQIYCRNE 119

QY 121 SRGCAQLTLGHLVHLKNDCHFEELPCVRPCKEVLKLDLDRHYEAKCKREATCSHC 180

DB 120 SRGCAQLTLGHLVHLKNDCHFEELPCVRPCKEVLKLDLDRHYEAKCKREATCSHC 179

QY 181 KSOYPMIALQKHEDTDCPCVAVSCPHKCSVOTLLRSELNHLSECVNAPSTCSFKRYGCV 240
 DB 180 KSOYPMIALQKHEDTDCPCVAVSCPHKCSVOTLLRSELNHLSECVNAPSTCSFKRYGCV 239
 QY 241 FOGTNOQIKAHKHEASSAVOHVNLKEMNSLEKRVSLQNESEVENKNSIOSLHNOICSEFI 300
 DB 240 FOGTNOQIKAHKHEASSAVOHVNLKEMNSLEKRVSLQNESEVENKNSIOSLHNOICSEFI 299
 QY 301 EIEROKEMLRNNESKILHLQVIDSQAEKLELDKEIRPFQONWEADSKSSVESLQNR 360
 DB 300 EIEROKEMLRNNESKILHLQVIDSQAEKLELDKEIRPFQONWEADSKSSVESLQNR 359
 QY 361 VTELESYDKSAGVARNRNGLESQLSRHDQTLVSHDIRLADMDLRFQVLETAASYNGVLIW 420
 DB 360 VTELESYDKSAGVARNRNGLESQLSRHDQTLVSHDIRLADMDLRFQVLETAASYNGVLIW 419
 QY 421 KIRDYKRRKOEAVNGKTLSTLYSOPFTYGYFGYKMCARVYLNGDMGKGTLSLFEVIMRG 480
 DB 420 KIRDYKRRKOEAVNGKTLSTLYSOPFTYGYFGYKMCARVYLNGDMGKGTLSLFEVIMRG 479
 QY 481 EYDALLPMPFKOKVTLMMDGSSRRHLGDAFKDPDNPSSSFKKPTGEMNIAISGCPVEVAQ 540
 DB 480 EYDALLPMPFKOKVTLMMDGSSRRHLGDAFKDPDNPSSSFKKPTGEMNIAISGCPVEVAQ 539
 QY 541 TVLENGTYIKDDTIFIKVIYVDTSDLPDP 568
 DB 540 TVLENGTYIKDDTIFIKVIYVDTSDLPDP 567

RESULT 9

ABB57054
 ID ABB57054 standard; Protein: 567 AA.

ABB57054;

07-MAR-2002 (first entry)

Mouse ischaemic condition related protein sequence SEQ ID NO:98.

Mouse; ischaemia; compressive ischaemia; occlusive ischaemia;
 vasospastic ischaemia; ischaemic condition; ischaemic disease.

Mus musculus.

WO200168188-A2.

22-NOV-2001.

18-MAY-2001; 2001WO-JP04192.

18-MAY-2000; 2000JP-0145977.

(UYN1-) UNIV NIHON SCHOOL JURIDICAL PERSON.

Ishikawa K, Asai S, Takahashi Y, Nagata T, Ishii Y;

WPI: 2002-034733/04.

N-PSDB: AB199264.

Examining the ischemic condition (e.g. occlusive ischemia) by measuring
 expression levels of particular genes defined in the specification or
 by determining the expression profile of a gene group comprising these
 genes -

Claim 2: Page 297-300; 2690pp; English.

The present invention describes a method for examining ischemic
 conditions, comprising measuring the expression levels of particular
 genes (1) in a test sample or determining the expression profile of a
 gene group in the sample comprising genes selected from (1). The method
 is useful for examining the ischemic condition (e.g. compressive
 ischemia, occlusive ischemia or vasospastic ischemia) by measuring
 expression levels of particular genes (AB199264 to AB199912, encoding

CC the protein sequences in ABB57020 to ABB57374) or by determining the
 CC expression profile of a gene group comprising these genes. The
 CC expression levels or expression profiles produced by these genes are
 CC used as an indicator when screening for ischemic condition-improving
 CC drugs or therapeutics for ischemic diseases. AB199913 and AB199914
 CC represent PCR primers for a mouse ischemic condition related sequence,
 CC which are used in the exemplification of the present invention.

SO Sequence 567 AA;

Query Match 95.7%; Score 2878.5; DB 23; Length 567;

Best Local Similarity 96.0%; Pred. No. 3.7e-228; Mismatches 14; Indels 1; Gaps 1;

Matches 545; Conservative 8; Mismatches 14; Indels 1; Gaps 1;

QY 1 MESSKKMDSPGALQOTNPPLKLTDRSAGPVPFPEQGGYKEKVKVTEEDKRCERCHLV 60
 DB 1 MESSKKMDSPGALQOTNPPLKLTDRSAGPVPFPEQGGYKEKVKVTEEDKRCERCHLV 59
 QY 61 CSPKOTECGHRFCESMAALLSSSPKCTACQESIVKDKVFNCKCKRETLAQIYCRNE 120
 DB 60 CNPOTECGHRFQSCMAALLSSSPKCTACQESIIKDKVFNCKCKRETLAQIYCRNE 119
 QY 121 SRGAEQTLTGHLIYHKNDCHEEELPCVPRDCKEYLRKDLRDHYEKACKYREATCSHC 180
 DB 120 GRGCAEQTLTGHLIYHKNDCHEEELPCVPRDCKEYLRKDLRDHYEKACKYREATCSHC 179
 QY 181 KSOYPMIALQKHEDTDCPCVAVSCPHKCSVOTLLRSELNHLSECVNAPSTCSFKRYGCV 240
 DB 180 KSOYPMIALQKHEDTDCPCVAVSCPHKCSVOTLLRSELNHLSECVNAPSTCSFKRYGCV 239
 QY 241 FOGTNOQIKAHKHEASSAVOHVNLKEMNSLEKRVSLQNESEVENKNSIOSLHNOICSEFI 300
 DB 240 FOGTNOQIKAHKHEASSAVOHVNLKEMNSLEKRVSLQNESEVENKNSIOSLHNOICSEFI 299
 QY 301 EIEROKEMLRNNESKILHLQVIDSQAEKLELDKEIRPFQONWEADSKSSVESLQNR 360
 DB 300 EIEROKEMLRNNESKILHLQVIDSQAEKLELDKEIRPFQONWEADSKSSVESLQNR 359
 QY 361 VTELESYDKSAGVARNRNGLESQLSRHDQTLVSHDIRLADMDLRFQVLETAASYNGVLIW 420
 DB 360 VTELESYDKSAGVARNRNGLESQLSRHDQTLVSHDIRLADMDLRFQVLETAASYNGVLIW 419
 QY 421 KIRDYKRRKOEAVNGKTLSTLYSOPFTYGYFGYKMCARVYLNGDMGKGTLSLFEVIMRG 480
 DB 420 KIRDYKRRKOEAVNGKTLSTLYSOPFTYGYFGYKMCARVYLNGDMGKGTLSLFEVIMRG 479
 QY 481 EYDALLPMPFKOKVTLMMDGSSRRHLGDAFKDPDNPSSSFKKPTGEMNIAISGCPVEVAQ 540
 DB 480 EYDALLPMPFKOKVTLMMDGSSRRHLGDAFKDPDNPSSSFKKPTGEMNIAISGCPVEVAQ 539
 QY 541 TVLENGTYIKDDTIFIKVIYVDTSDLPDP 568
 DB 540 TVLENGTYIKDDTIFIKVIYVDTSDLPDP 567

RESULT 10

AAW27432
 ID AAW27432 standard; Protein: 543 AA.

AAW27432;

27-MAR-1998 (first entry)

Human CRAF1 isoform p55del9.

CD40 receptor associated factor 1; CRAF1-a; TRAF-3; p55; human;
 CD40 mediated intracellular signalling; organ rejection; allergy;
 hay fever; autoimmune disease; systemic lupus erythematosus;
 rheumatoid arthritis; myasthenia gravis; Graves' disease;
 idiopathic thrombocytopenia purpura; haemolytic anaemia;
 diabetes mellitus; psoriasis; hyper immunoglobulin E syndrome;
 apoptosis; Rietter's syndrome; spondyloarthritis; Lyme disease; HIV;
 syphilis; tuberculosis; arthritis; scleroderma; pulmonary fibrosis;

| XX | Sequence | 543 AA; | |
|-----------|--|--|----------------------------------|
| QY | Query Match | 94.7%; | Score 2847.5; DB 18; Length 543; |
| QY | Best Local Similarity | 95.6%; | Pred. No. 1.2e-225; |
| | Matches 543; Conservative | 0; | Mismatches 0; Indels 25; Gaps |
| QY | 1 | MESSKKMDSPEALOTNPPLKTHDNRASGRVYVPVPGGGTAKKFKYKVEDKYKCEKCHLV | 60 |
| Db | 1 | MESSKKMDSPEALOTNPPLKTHDNRASGRVYVPVPGGGTAKKFKYKVEDKYKCEKCHLV | 60 |
| QY | 61 | CSPKQTEGHHFCECSMAALLSSSSPKCAOCESIVKRVKNDCKCRELLAQIYCRNE | 12 |
| Db | 61 | CSPKQTEGHHFCECSMAALLSSSSPKCAOCESIVKRVKNDCKCRELLAQIYCRNE | 12 |
| QY | 121 | SRGCAEOLITGLHLVHLKNDCHFEELPCVPRDCKEKVLRKLDNRHYEAKCYREATCSHC | 18 |
| Db | 121 | SRGCAEOLITGLHLVHLKNDCHFEELPCVPRDCKEKVLRKLDNRHYEAKCYREATCSHC | 18 |
| QY | 181 | KSOYPMIALQKHEDTDCPCVVVSCPHKCSVOPTILRSLSAHLSPCVNABSTCSFKRYGCV | 24 |
| Db | 181 | KSOYPMIALQKHEDTDCPCVVVSCPHKCSVOPTILRSLSAHLSPCVNABSTCSFKRYGCV | 24 |
| QY | 241 | FOGTNQOIKAHKSSAVQHVNLKEMSNLEKRVSLQNESVEKNKSIGSLHQICSEFI | 30 |
| Db | 218 | --GTNOOIKAHKSSAVQHVNLKEMSNLEKRVSLQNESVEKNKSIGSLHQICSEFI | 27 |
| QY | 301 | EIEPKQKEMLNNSKTLIHQRVIDSQAEKLELDEKTRPPRQWEEADSKSSVESLQNR | 36 |
| Db | 276 | EIEPKQKEMLNNSKTLIHQRVIDSQAEKLELDEKTRPPRQWEEADSKSSVESLQNR | 33 |
| QY | 361 | VTELESVDKSAGAVANTGTLSLSQLSRBDQMSVHDIRLMDLRFROYETASVNGVLIW | 42 |
| Db | 336 | VTELESVDKSAGAVANTGTLSLSQLSRBDQMSVHDIRLMDLRFROYETASVNGVLIW | 39 |
| QY | 421 | KIRPKRRKRDKAVMGKTLISLVSQPPYTGTCYKKACAVYLVNGDMGKGTHLSLFFVIW | 48 |
| Db | 396 | KIRPKRRKRDKAVMGKTLISLVSQPPYTGTCYKKACAVYLVNGDMGKGTHLSLFFVIW | 45 |
| QY | 481 | EYDALLPWPVKQKVTLMALDDOSSSRHIGDAFKFRDPPNSSFKKPRGEMNTASGCPVPAQ | 54 |
| Db | 456 | EYDALLPWPVKQKVTLMALDDOSSSRHIGDAFKFRDPPNSSFKKPRGEMNTASGCPVPAQ | 51 |
| QY | 541 | TVLENGTYIKDDTIFIKVIVDTSDLPDP 568 | |
| Db | 516 | TVLENGTYIKDDTIFIKVIVDTSDLPDP 543 | |
| RESULT 11 | | | |
| AAW27433 | AAW27433 standard; Protein; 665 AA. | | |
| XX | AAW27433; | | |
| XX | 27-MAR-1998 (first entry) | | |
| XX | Human CRAPI-b isoform p70del9. | | |
| KW | CD40 receptor associated factor 1; CRAPI-b; TRAF-3; p70; human; | | |
| KW | CD40 mediated intracellular signaling; organ rejection; allergy; | | |
| KW | high fever; autoimmune disease; systemic lupus erythematosus; | | |
| KW | rheumatoid arthritis; myasthenia gravis; Graves' disease; | | |
| KW | idiopathic thrombocytopenia purpura; haemolytic anaemia; | | |
| KW | diabetes mellitus; psoriasis; hyper immunoglobulin E syndrome; | | |
| KW | apoptosis; Rietter's syndrome; spondyloarthritis; Lyme disease; HIV; | | |
| KW | syphilis; tuberculosis; arthritis; scleroderma; pulmonary fibrosis; | | |
| KW | pneumocystosis; adult respiratory distress syndrome; pneumonitis; | | |
| KW | asbestosis; silicosis; Farmer's lung; hepatitis; cirrhosis; | | |
| KW | atherosclerosis; multiple sclerosis; glomerulonephritis; | | |
| KW | glomerulonephritis; glomerulopathy; kidney disease; nephropathy; | | |
| KW | endocarditis; leprosy; malaria; Goodpasture's disease; | | |
| KW | Henoch-Schoenlein purpura; polyarteritis; multiple myeloma; | | |
| KW | Wegener's granulomatosis; cryoglobulinemia; | | |

[illegible]

PD 06-JUN-1996.
 XX 04-DEC-1995; 95WO-US15695.
 PF
 XX 02-DEC-1994; 94US-0349357.
 PR
 XX (LJOL-) LA JOLIA CANCER RES FOUND.
 XX
 XX Reed JC, Sato T;
 PI
 DR MPI: 1996-286818/29.
 DR N-PSDB; AAT30773.
 XX
 PT New CD40 associated protein, agonists and antagonists - used to
 PT modulate cell proliferation, immune response, apoptosis etc., e.g.
 PT for treating cancer or autoimmune disease
 XX
 PS Claim 3; Fig 1; 94pp: English.
 CC This is a CD40 associated protein (CAP)-1. This CAP is a protein that
 CC specifically binds to CD40, a cell surface receptor involved in
 CC apoptosis. Agonists and antagonists of CAP can increase or decrease
 CC the level of CAP expression in a cell and can thereby modulate the
 CC function of the cell. Such compounds can be used to treat cancer,
 CC autoimmune diseases like asthma, hay fever, rheumatoid arthritis and
 CC immunodeficiency diseases and neurodegeneration. Antibodies that bind
 CC specifically to CAP can be used to assay CAP, to detect pathologically
 CC altered levels. The encoding nucleic acid can be used to identify
 CC related genes and to express CAP for gene therapy.
 XX
 SO Sequence 543 AA.

Query Match 94.1%; Score 2831.5; DB 17; Length 543;
 Best Local Similarity 95.2%; Pred. No. 2,6e-224;
 Matches 541; Conservative 0; Mismatches 2; Indels 25; Gaps 1;

QY 1 MESSKMDSPGALQTNPRPLKHTDRSAGTPVPEVGGGKFKVTVEDKCYKCHLVL 60
 DB 1 MESSKMDSPGALQTNPRPLKHTDRSAGTPVPEVGGGKFKVTVEDKCYKCHLVL 60
 QY 61 CSPKQTECGHRCESGSMALLSSSPKCPACQESTYKDKVDFDNCCKRETLAOTYCRNE 120
 DB 61 CSPKQTECGHRCESGSMALLSSSPKCPACQESTYKDKVDFDNCCKRETLAOTYCRNE 120
 QY 121 SRGCAQLTLGHLVHLKNDCHFEELPCVPRDCKEVLKRDLDHYEKACKYREATCSHC 180
 DB 121 SRGCAQLTLGHLVHLKNDCHFEELPCVPRDCKEVLKRDLDHYEKACKYREATCSHC 180
 QY 181 KSOVPALALQKHEDDPCVNVVSCPHKCSVOTLRLSE----- 217
 DB 181 KSOVPALALQKHEDDPCVNVVSCPHKCSVOTLRLSE----- 217
 QY 241 FQGTNOQIAKHAESSAVQVHNLTKEMSNLEKKVSLDNESEYKKSQSLHNOICSEI 300
 DB 218 --GTNOQIAKHAESSAVQVHNLTKEMSNLEKKVSLDNESEYKKSQSLHNOICSEI 275
 QY 301 ETERQKEMLRNNEKILHLQVYDSQAEKLKELKEIRPFROMWEADSMKSSVESLONR 360
 DB 276 ETERQKEMLRNNEKILHLQVYDSQAEKLKELKEIRPFROMWEADSMKSSVESLONR 335
 QY 361 VTELESVKSAGOVARNGLLESQLSRHDQMLSVHDIRLADMDLRFQVLEFASVGLIWI 420
 DB 336 VTELESVKSAGOVARNGLLESQLSRHDQMLSVHDIRLADMDLRFQVLEFASVGLIWI 395
 QY 421 KIRDYKRRKQEAVMGKTLISYQPFYGYFGYKMCARYLNGDGGKGTHTLSLFFVIRG 480
 DB 396 KIRDYKRRKQEAVMGKTLISYQPFYGYFGYKMCARYLNGDGGKGTHTLSLFFVIRG 455
 QY 481 EYDALLPMPFKQKVTLMIDGSSRRHLGDAFKPDPNSSSEKPKPTGENNINASGCPVFAQ 540
 DB 456 EYDALLPMPFKQKVTLMIDGSSRRHLGDAFKPDPNSSSEKPKPTGENNINASGCPVFAQ 515
 QY 541 TVLENGTYIKDDTIFIKIVYVDTSLDLP 568

DB 516 TVLENGTYIKDDTIFIKIVYVDTSLDLP 543
 ||||||||||||||||||||||||||||
 RESULT 13
 AAM27436
 ID AAM27436 standard; Protein: 516 AA.
 XX
 AC AAM27436;
 XX
 DT 27-MAR-1998 (first entry)
 XX
 DE Human CRAF1-b isoform p70del8,9.
 KW CD40 receptor associated factor 1; CRAF1-b; TRAF-3; p70; human;
 KW CD40 mediated intracellular signalling; organ rejection; allergy;
 KW hay fever; autoimmune disease; systemic lupus erythematosus;
 KW rheumatoid arthritis; myasthenia gravis; Graves' disease;
 KW idiopathic thrombocytopenia purpura; haemolytic anaemia;
 KW diabetes mellitus; psoriasis; hyper immunoglobulin E syndrome;
 KW apoptosis; Rietter's syndrome; spondyloarthritis; Lyme disease; HIV;
 KW syphilis; tuberculosis; arthritis; scleroderma; pulmonary fibrosis;
 KW pneumoconiosis; adult respiratory distress syndrome; pneumonitis;
 KW asbestosis; silicosis; Farmer's lung; hepatitis; cirrhosis;
 KW atherosclerosis; multiple sclerosis; glomerulonephritis;
 KW glomerulocystosis; glomerulopathy; kidney disease; nephropathy;
 KW endocarditis; leprosy; malaria; Goodpasture's disease;
 KW Henoch-Schoenlein purpura; polyarteritis; multiple myeloma;
 KW Wegener's granulomatosis; cryoglobulinemia;
 KW Waldenstrom's macroglobulinemia; amyloidosis; Sjogren's syndrome;
 KW AIDS; oesophageal dysmotility; inflammatory bowel disease;
 KW bladder disease; Epstein-Barr virus; mononucleosis; B cell tumour;
 KW Burkitt's lymphoma; nasopharyngeal carcinoma; pneumonia;
 KW gene therapy; diagnosis.
 KW
 XX
 OS Homo sapiens.
 XX
 FH Key
 FT Domain
 FT
 FT /label= "CRAF1-b domain
 FT /note= "Claim 1"
 FT 239..263
 FT /note= "zinc finger 1 (zn binding to Cys-239,
 FT Cys-246, His-258 and Cys-263)"
 FT Region
 FT 270..292
 FT /note= "zinc finger 2 (zinc binding to Cys-270,
 FT Cys-275, His-287 and Cys-292"
 FT Binding-site
 FT 16..19
 FT /note= "putative SH3 binding motif"
 FT Binding-site
 FT 44..47
 FT /note= "putative SH3 binding motif"
 FT Binding-site
 FT 103..110
 FT /note= "putative SH3 binding motif"
 FT
 FT WO9734473-A1.
 XX
 PD 25-SEP-1997.
 XX
 PF 21-MAR-1997; 97WO-US05076.
 XX
 XX 18-SEP-1996; 96US-0026584.
 PR 21-MAR-1996; 96US-0013820.
 PR 01-MAY-1996; 96US-0016626.
 PR 01-MAY-1996; 96US-0016659.
 XX
 PA (UYCO) UNIV COLUMBIA NEW YORK.
 XX
 PI Cleary AM, Frank DM, Lederman S;
 XX
 DR MPI: 1997-479907/44.
 DR N-PSDB; AAT90123.
 XX
 PT Protein comprising CRAF1-b domain capable of inhibiting CD40

PT mediated cell activation - useful to treat conditions characterised
PT by aberrant or unwanted level of CD40 mediated intracellular
PT signalling

Example 1; Fig 1A-O; 158bp; English.

CC This polypeptide comprises a CRAF1 (TRAF-3) protein designated
CC p70del8,9 that is encoded by exons 1-2, 4-7 and 10-13 of the human
CC CRAF1 gene (see AAT90123). Different isoforms (AAW27428-37) of CRAF1
CC have been identified that arise from alternative splicing. CRAF1
CC peptides comprising from 0-4 zinc finger domains, and nucleic acids
CC encoding them, can be used to inhibit CD40 ligand activation of
CC cells that express CD40 on their surface, particularly by
CC introducing the nucleic acid molecule into the cells, and used to
CC treat conditions characterised by an aberrant or unwanted level of
CC CD40 mediated intracellular signalling, such as organ rejection, or
CC a CD40 dependent immune response in a subject receiving gene
CC therapy. The condition may be an allergic response or an
CC autoimmune response, or may be dependent on CD40 ligand-induced
CC activation of epithelial cells, an inflammatory kidney disease, a
CC smooth muscle cell-dependent disease, or a condition associated
CC with Epstein-Barr virus.

CC Sequence 516 AA;

Query Match 89.1%; Score 2680; DB 18; Length 516;
Best Local Similarity 90.8%; Pred. No. 7.1e-212;
Matches 516; Conservative 0; Mismatches 0; Indels 52; Gaps 1;

OY 1 MESSKMDSPGALQTNPLKLTHTDSAGTPVPEOGYKKEFYVTDKTKCEKCHLV 60
DB 1 MESSKMDSPGALQTNPLKLTHTDSAGTPVPEOGYKKEFYVTDKTKCEKCHLV 60
OY 61 CSPKTEGCHRFCECMAALLSSSPKCTACQESTYKRVKVKDKCKREIILALQYCRNE 120
DB 61 CSPKTEGCHRFCECMAALLSSSPKCTACQESTYKRVKVKDKCKREIILALQYCRNE 120
OY 121 SSGCAEOLTLGLHLVHLKNDCHFEELPCVRPCKEKVKRKLDRHVEACKYREATCSHC 180
DB 121 SSGCAEOLTLGLHLVHLKNDCHFEELPCVRPCKEKVKRKLDRHVEACKYREATCSHC 180
OY 181 KSOVPMIALQKHEDYDCPCVVVSCPHKCSVQTLRSELSEHLSECVNAPSTCSEKRYGCY 240
DB 181 KSOVPMIAL----- 189
OY 241 PGCTNOQITAHASSAYOHVNLKEMNSLEKKVSLQNESYEKKSIOSLHNOICSPFI 300
DB 190 -OGTNOQITAHASSAYOHVNLKEMNSLEKKVSLQNESYEKKSIOSLHNOICSPFI 248
OY 301 EIERQKEMLRNNEKSLHLQRYIDSOAEKLELKEIRPFROMWEADSMKSSVESLQNR 360
DB 249 EIERQKEMLRNNEKSLHLQRYIDSOAEKLELKEIRPFROMWEADSMKSSVESLQNR 308
OY 361 VTELESVDKSAQOVARNTGLLSQSLSRHDOMLSYHDIRLADMDLRFQYLETASYNGVLIW 420
DB 309 VTELESVDKSAQOVARNTGLLSQSLSRHDOMLSYHDIRLADMDLRFQYLETASYNGVLIW 368
OY 421 KIRDRYRRKQEAVMGKTLISYOSPFYTGFGYKMCARVYLNDGKGGKTHLSLFVIMRG 480
DB 369 KIRDRYRRKQEAVMGKTLISYOSPFYTGFGYKMCARVYLNDGKGGKTHLSLFVIMRG 428
OY 481 EYDALLPWFPEKQVTLMLMDGSSRRHLGDAEFPDNSSSEFKKPTGEMNIAAGCEPVFAO 540
DB 429 EYDALLPWFPEKQVTLMLMDGSSRRHLGDAEFPDNSSSEFKKPTGEMNIAAGCEPVFAO 488
OY 541 TVLENGTYIKDITFIKVIYVDSLPDP 568
DB 489 TVLENGTYIKDITFIKVIYVDSLPDP 516

RESULT 14
AAW27437
ID AAW27437 standard; Protein; 638 AA.

XX
AC AAW27437;
XX
DT 27-MAR-1998 (first entry)
XX
DE Human CRAF1-b isoform p70del8,9.

KW CD40 receptor associated factor 1; CRAF1-b; TRAF-3; p70; human;
KW CD40 mediated intracellular signalling; organ rejection; allergy;
KW hay fever; autoimmune disease; systemic lupus erythematosus;
KW rheumatoid arthritis; myasthenia gravis; Graves' disease;
KW idiopathic thrombocytopenia purpura; haemolytic anaemia;
KW diabetes mellitus; psoriasis; hyper immunoglobulin E syndrome;
KW apoptosis; Ricketts' syndrome; spondyloarthritis; Lyme disease; HIV;
KW syphilis; tuberculosis; arthritis; scleroderma; pulmonary fibrosis;
KW pneumoconiosis; adult respiratory distress syndrome; pneumonitis;
KW asbestosis; silicosis; Farmer's lung; hepatitis; cirrhosis;
KW atherosclerosis; multiple sclerosis; glomerulonephritis;
KW glomerulocystitis; glomerulopathy; kidney disease; nephropathy;
KW endocarditis; leprosy; malaria; Goodpasture's disease;
KW Henoch-Schoenlein purpura; polyarteritis; multiple myeloma;
KW Wegener's granulomatosis; cryoglobulinemia;
KW Waldenstrom's macroglobulinemia; amyloidosis; Sjogren's syndrome;
KW AIDS; oesophageal dysmotility; inflammatory bowel disease;
KW bladder disease; Epstein-Barr virus; mononucleosis; B cell tumour;
KW Burkitt's lymphoma; nasopharyngeal carcinoma; pneumonia;
KW gene therapy; diagnosis.

KW Homo sapiens.

OS
FH Key Location/Qualifiers
FT Domain 52..122
FT /label= "CRAF-b domain
FT /note= "Claim 1"

FT Region 239..263
FT /note= "zinc finger 1 (Zn binding to Cys-239,
FT Cys-246, His-258 and Cys-263)"

FT Region 270..292
FT /note= "zinc finger 2 (zinc binding to Cys-270,
FT Cys-275, His-287 and Cys-292"

FT Binding-site 16..19
FT /note= "putative SH3 binding motif"

FT Binding-site 44..47
FT /note= "putative SH3 binding motif"

FT Binding-site 103..110
FT /note= "putative SH3 binding motif"

PN WO9734473-A1.

XX 25-SEP-1997.

XX 21-MAR-1997; 97WO-US05076.

XX 18-SEP-1996; 96US-0026584.

XX 21-MAR-1996; 96US-0013820.

XX 01-MAY-1996; 96US-0016626.

XX 01-MAY-1996; 96US-0016659.

XX (UYCO) UNIV COLUMBIA NEW YORK.

XX Cleary AM, Frank DM, Lederman S;

XX WPI; 1997-479907/44.

XX N-PSDB; AAT90123.

XX Protein comprising CRAF1-b domain capable of inhibiting CD40

XX mediated cell activation - useful to treat conditions characterised

XX by aberrant or unwanted level of CD40 mediated intracellular

XX signalling

XX Example 1; Fig 1A-O; 158bp; English.

XX This polypeptide comprises a CRAF1 (TRAF-3) protein designated

CC p70del1.9 that is encoded by exons 1-2, 4-7 and 10-13 of the human
 CC CRAF gene (see AAW27434). Different isoforms (AAW27428-37) of CRAF1
 CC have been identified that arise from alternative splicing. CRAF1
 CC peptides comprising from 0-4 zinc finger domains, and nucleic acids
 CC encoding them, can be used to inhibit CD40 ligand activation of
 CC cells that express CD40 on their surface, particularly by
 CC introducing the nucleic acid molecule into the cells, and used to
 CC treat conditions characterised by an aberrant or unwanted level of
 CC CD40 mediated intracellular signalling, such as organ rejection, or
 CC CD40 dependent immune response in a subject receiving gene
 CC therapy. The condition may be an allergic response or an
 CC autoimmune response, or may be dependent on CD40 ligand-induced
 CC activation of epithelial cells; an inflammatory kidney disease, a
 CC smooth muscle cell-dependent disease, or a condition associated
 CC with Epstein-Barr virus.

XX Sequence 638 AA:

Query Match 89.1%; Score 2680; DB 18; Length 638;
 Best Local Similarity 90.8%; Pred. No. 9,7e-212;
 Matches 516; Conservative 0; Mismatches 0; Indels 52; Gaps 1;

0Y 1 MESSKMDSPGALQTNPKLHTDSAGPVVPEGGYKKEFKVTVEDKCKCKHLYL 60
 DB 123 MESSKMDSPGALQTNPKLHTDSAGPVVPEGGYKKEFKVTVEDKCKCKHLYL 182
 0Y 61 CSPKQTECHRCESCMALLSSSPKCTACQESTIVKDKVCKCKREIATLQICRNE 120
 DB 183 CSPKQTECHRCESCMALLSSSPKCTACQESTIVKDKVCKCKREIATLQICRNE 242
 0Y 121 SNGCAQQLTGLHLVHLKNDCHFEELPCVRPCKCKVLRKDLRDHVEKACKYREATCSHC 180
 DB 243 SNGCAQQLTGLHLVHLKNDCHFEELPCVRPCKCKVLRKDLRDHVEKACKYREATCSHC 302
 0Y 181 KSOVPALALQKHEDTDCPCVVVSCPHKCSVQTLRLSELASLSECVANSPCSKRRGCV 240
 DB 303 KSOVPALALQKHEDTDCPCVVVSCPHKCSVQTLRLSELASLSECVANSPCSKRRGCV 311
 0Y 241 PGCTNOQIAHASSAVOHVNLKEMWSNLEKKVSLQNESEKKNKSIOSLHNOICSEI 300
 DB 312 -GGTNOQIAHASSAVOHVNLKEMWSNLEKKVSLQNESEKKNKSIOSLHNOICSEI 370
 0Y 301 ETEROKEMLRNNEKILHQRYSQAEKLELDEKIRPEKQNEEADSMKSSYESIQNR 360
 DB 371 ETEROKEMLRNNEKILHQRYSQAEKLELDEKIRPEKQNEEADSMKSSYESIQNR 430
 0Y 361 VTELESVDKSAQVARNGLLESQLSRHQDMLSVHDIRLADMQLRFVLETAASYNGVLTW 420
 DB 431 VTELESVDKSAQVARNGLLESQLSRHQDMLSVHDIRLADMQLRFVLETAASYNGVLTW 490
 0Y 421 KIROVKKRKKQEAHVNGKTSLSQPPYGYEGYKMCARVYLNGDMGKGTLSLFEVIMRG 480
 DB 491 KIROVKKRKKQEAHVNGKTSLSQPPYGYEGYKMCARVYLNGDMGKGTLSLFEVIMRG 550
 0Y 481 EYDALLPMPFKOKVTLMMDGSSRRHLGQAFKDPNSSFKKPTGEMNIAASCPVFAO 540
 DB 551 EYDALLPMPFKOKVTLMMDGSSRRHLGQAFKDPNSSFKKPTGEMNIAASCPVFAO 610
 0Y 541 TVLENGTYIKDDTFIKYIVDTSDLPDP 568
 DB 611 TVLENGTYIKDDTFIKYIVDTSDLPDP 638

RESULT 15

ID AAW27434 standard; protein; 512 AA.

XX AAW27434;

XX 27-MAR-1998 (first entry)

XX Human CRAFT1 isoform p55del1.9, 10.

KW CD40 receptor associated factor 1; CRAFT1-a; TRAF-3; p55; human;
 KW CD40 mediated intracellular signalling; organ rejection; allergy;
 KW hay fever; autoimmune disease; systemic lupus erythematosus;
 KW rheumatoid arthritis; myasthenia gravis; Graves' disease;
 KW idiopathic thrombocytopenia purpura; hemolytic anaemia;
 KW diabetes mellitus; psoriasis; hyper immunoglobulin E syndrome;
 KW apoptosis; Rieger's syndrome; spondylarthritis; Lyme disease; HIV;
 KW syphilis; tuberculosis; arthritis; scleroderma; pulmonary fibrosis;
 KW pneumoconiosis; adult respiratory distress syndrome; pneumonitis;
 KW asbestosis; silicosis; Farmer's lung; hepatitis; cirrhosis;
 KW atherosclerosis; multiple sclerosis; glomerulonephritis;
 KW glomerulosclerosis; kidney disease; nephropathy;
 KW endocarditis; leprosy; malaria; Goodpasture's disease;
 KW Henoch-Schönlein purpura; polyarteritis; multiple myeloma;
 KW Wegener's granulomatosis; cryoglobulinoidemia;
 KW Waldenström's macroglobulinemia; amyloidosis; Sjögren's syndrome;
 KW AIDS; oesophageal dysmotility; inflammatory bowel disease;
 KW bladder disease; Epstein-Barr virus; mononucleosis; B cell tumour;
 KW Burkitt's lymphoma; nasopharyngeal carcinoma; pneumonia;
 KW gene therapy; diagnosis.

XX Homo sapiens.

XX Key Location/Qualifiers
 XX Region 117..141

XX /note= "zinc finger 1 (2n binding to Cys-117,
 XX Cys-124, His-136 and Cys-141)"

XX Region 148..170

XX /note= "zinc finger 2 (zinc binding to Cys-148,
 XX Cys-153, His-165 and Cys-170)"

XX Region 177..197

XX /note= "zinc finger 3 (2n binding to Cys-177,
 XX Cys-180, His-192 and Cys-197)"

XX W0934473-A1.

XX 25-SEP-1997.

XX 21-MAR-1997; 97WO-US05076.

XX 18-SEP-1996; 96US-0026584.

XX 21-MAR-1996; 96US-0013820.

XX 01-MAY-1996; 96US-0016626.

XX 01-MAY-1996; 96US-0016659.

XX (UNCO) UNIV COLUMBIA NEW YORK.

XX Cleary AM, Frank DM, Lederman S;

XX WPI; 1997-479907/44.

XX N-PSDB; AAT90123.

XX Protein comprising CRAFT1-b domain capable of inhibiting CD40
 XX mediated cell activation - useful to treat conditions characterised
 XX by aberrant or unwanted level of CD40 mediated intracellular
 XX signalling

XX Example 1: Fig ID-O: 158pp; English.

XX This polypeptide comprises a CRAFT1 (TRAF-3) isoform designated
 XX p55del1.9, 10. It is encoded by exons 4-8 and 11-13 of the human
 XX CRAFT1 gene (see AAW27434) and arises by alternative splicing of the
 XX sequence for CRAFT1-a (see AAW27431), a signalling protein that
 XX interacts with the cytoplasmic tail of B cell surface molecule CD40
 XX and which mediates a variety of T-dependent effects on B cell
 XX activation and differentiation. A higher mol.wt. CRAFT1, designated
 XX CRAFT1D (see AAW27428), has also been identified, as well as isoforms
 XX p5 (see AAW27429), p15 (see AAW27430) and variants of CRAFT1-a and
 XX CRAFT1-b (see AAW27432-37) that comprise different combinations of 5
 XX zinc fingers. CRAFT1 peptides, comprising from 0-4 zinc finger
 XX domains, and nucleic acids encoding them, can be used to inhibit
 XX CD40 ligand activation of cells that express CD40 on their surface,
 XX particularly by introducing a nucleic acid molecule into the cells,

and used to treat conditions characterised by an aberrant or unwanted level of CD40 mediated intracellular signalling, such as organ rejection, or a CD40 dependent immune response in a subject receiving gene therapy. The condition may be an allergic response or an autoimmune response, or may be dependent on CD40 ligand-induced activation of epithelial cells, an inflammatory kidney disease, a smooth muscle cell-dependent disease, or a condition associated with Epstein-Barr virus.

512 AA;
Sequence

Query Match

88.98; Score 2674; DB 18; Length 512;
00 18; Prod No 3 30-311.

| | | | | | | | | | |
|---------|------|--------------|----|------------|----|--------|-----|------|----|
| Matches | 512; | Conservative | 0; | Mismatches | 0; | Indels | 56; | Gaps | 1, |
|---------|------|--------------|----|------------|----|--------|-----|------|----|

| | | | | | | | | | |
|---------|------|--------------|----|------------|----|--------|-----|------|----|
| Matches | 512; | Conservative | 0; | Mismatches | 0; | Indels | 56; | Gaps | 1, |
|---------|------|--------------|----|------------|----|--------|-----|------|----|

| | | | |
|----|-----|--|-----|
| 0Y | 1 | MESKKNDSPALOTNPRLKHTDRSAGTVPVPEOGGYEKYKVLVEDYKCKECHKLV | 60 |
| 0Y | 1 | MESSKKNDSPALOTNPRLKHTDRSAGTVPVPEOGGYEKYKVLVEDYKCKECHKLV | 60 |
| Db | 1 | MESSKKNDSPALOTNPRLKHTDRSAGTVPVPEOGGYEKYKVLVEDYKCKECHKLV | 60 |
| 0Y | 61 | CSPKOTECGHFFCESCMALLSSSSPCTACOESIVDKYFKNDCKRETLAQIYCRNE | 120 |
| Db | 61 | CSPKOTECGHFFCESCMALLSSSSPCTACOESIVDKYFKNDCKRETLAQIYCRNE | 120 |
| 0Y | 121 | SRGCAEOLTLGHLVHLKNDCHFEBELPCVBPDCKEKYLKRDLDHYEKACKYREALCSC | 180 |
| Db | 121 | SRGCAEOLTLGHLVHLKNDCHFEBELPCVBPDCKEKYLKRDLDHYEKACKYREATCSHC | 180 |
| 0Y | 181 | KSOYMIALOKHEDDPCVAVCSOPHCQVOTLLRSELAHLSBCVNAPTSCSFKRIGCV | 240 |
| Db | 181 | KSOYMIALOKHEDDPCVAVCSOPHCQVOTLLRSE----- | 217 |
| 0Y | 241 | FOGTNOQIKAHEDASSAVOHVNLKEWMSNLSLEKQVSLLOÑESVEKENKSIOGLHNOCSFEI | 300 |
| Db | 218 | -----VSLLQÑESVEKENKSIOGLHNOCSFEI | 244 |
| 0Y | 301 | ETEROKEMLRNNEKSIILHÖRVITOQAKLELDEKETRPROMNEEDSMKSSVESIQNR | 360 |
| Db | 245 | ETEROKEMLRNNEKSIILHÖRVITOQAKLELDEKETRPROMNEEDSMKSSVESIQNR | 304 |
| 0Y | 361 | VTELESVDKSAGOVARNRTGLLESQLSRBDQMLSVHDIRFLAMDMDLRFÖVLETSYNGVLIV | 420 |
| Db | 305 | VTELESVDKSAGOVARNRTGLLESQLSRBDQMLSVHDIRFLAMDMDLRFÖVLETSYNGVLIV | 364 |
| 0Y | 421 | KIRDYKRRRÖKÖZAVMGKTLISLYSQPEYTYGFCYKMCARVYLNGDMGKGTILSLFVIMRG | 480 |
| Db | 365 | KIRDYKRRRÖKÖZAVMGKTLISLYSQPEYTYGFCYKMCARVYLNGDMGKGTILSLFVIMRG | 424 |
| 0Y | 481 | EYDALLPMPFKÖKVITLMLMDQSSRRRHGDAPKPDNPSNSSFKKPTGEMNITASGCPVPAQ | 540 |
| Db | 425 | EYDALLPMPFKÖKVITLMLMDQSSRRRHGDAPKPDNPSNSSFKKPTGEMNITASGCPVPAQ | 484 |
| 0Y | 541 | TYLENGTYIKDDTIFIKVIVDTSDLPDP | 568 |
| Db | 485 | TYLENGTYIKDDTIFIKVIVDTSDLPDP | 512 |

Search completed: December 19, 2002, 14:54:25
Job time : 41 secs